U.S. Serial No.: 10/519,532

"Ceramic Pigments on Apatite Basis"

Response to Office Action dated January 11, 2007

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AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A compound having the general formula (I)

 $M_5(AO_4)_3X$,

wherein

M represents Ba, Sr, Ca or a mixture thereof;

A represents P, V or a mixture thereof; and

wherein the group $M_5(AO_4)_3$ forms an apatite structure and X is situated in the hexagonal channels of the apatite structure and includes Cu-atoms, with the proviso that the compound is not $Sr_5(VO_4)_3(CuO), Sr_5(VO_4)_3(Cu_{0.894}O_{0.952})$, or $(Sr_0 \circ Ca_{0.1})_5(Cr^VO_4)_3(CuO)$.

- 2. (Cancelled)
- (Currently Amended) The compound of claim 1, wherein X <u>further</u> represents a mixture including of Cu²⁺, Cu⁺, O², OH⁻, F⁻, Cl⁻, Br⁻ and/or of l⁻.
- 4. (Original) The compound of claim 1, wherein X comprises copper ions.
- (Previously Presented) The compound according to claim 1, wherein X comprises Cu²⁺.
- (Previously Presented) The compound according to claim 1, wherein linear units O-Cu-O
 are present in the hexagonal channels of the apatite structure.
- (Previously Presented) The compound according to claim 1, wherein X represents Cu_xO_yH_z, wherein 0<x≤0.85, 0≤x<1 and 0.5<y≤1.
- 8. (Previously Presented) The compound according to claim 7, wherein 0.1<x<0.6.
- 9. (Previously Presented) The compound according to claim 1, wherein A represents P.

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 (Previously Presented) A process for preparing a compound according to claim 1 comprising the steps:

- (i) mixing of compounds comprising the elements M, A and X,
- thermal treatment of the mixture in the range of 200 to 1700°C to yield a compound of the general formula (I).
- (Original) The process according to claim 10, wherein the thermal treatment is performed for 0.01 to 60 hours.
- (Previously Presented) The process according to claim 10, wherein the thermal treatment is performed when intermediate regrinding.
- (Previously Presented) The process according to claim 10, wherein the thermal treatment of the mixture is performed in air, argon or oxygen.
- 14. (Previously Presented) The process according to claim 10, further comprising the step
 - (iii) thermal treatment of the compound obtained in step (ii) in oxygen, inert gas atmosphere or vacuum at 500 to 900°C for 0.5 to 24 hours.
- (Previously Presented) The process for preparing a compound of claim 1 comprising the steps
 - (i) mixing of carbonates of M, (NH₄)H₂PO₄ and Cu-compounds,
 - (ii) thermal treatment of this mixture in solid state in air at 600 to 850°C for 1 to 5 hours.
 - (iii) regrinding,
 - (iv) thermal treatment at 1100 to 1400°C for about 1 to 24 hours,
 - (v) cooling and
 - (vi) regrinding.
- (Previously Presented) Pigment comprising a compound of claim 1.

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 (Currently Amended) Pigment according to claim 45 16, wherein X in the compound of general formula (I) comprises Cu²⁺.

- 18. (Currently Amended) <u>A method of use Use</u> of a compound according to claim 1 <u>comprising using said compound</u> as pigment, paint or as coloring additive in cements or plasters.
- (Currently Amended) Pigment comprising a compound <u>prepared by a process according</u> to of-claim 10.
- (Currently Amended) Pigment comprising a compound prepared by a process according to of claim 15.